



Code: 0624

Family: Information Technology

Service: Administrative

Group: Clerical, Accounting, and General Office

Series: Information Technology

CLASS TITLE: GIS DATABASE ANALYST

CHARACTERISTICS OF THE CLASS

Under direction, assists the GIS Manager in the analysis and creation of various Geographic Information Systems (GIS) databases for the City's GIS system, and performs related duties as required

ESSENTIAL DUTIES

- Uses GIS and other database technology to analyze and assess various data sets for accuracy, completeness, and usability in the City's GIS system
- Manipulates GIS and departmental databases to generate tabular and cartographic output
- Develops procedures for converting data into GIS format
- Assists departments in converting, building, and maintaining graphic and non-graphic databases for GIS applications
- Documents the analysis of data sets for future reference, using various software applications and diagramming tools
- Develops and maintains standards for GIS databases to ensure the integrity and agreement between GIS data sets
- Oversees the operation and maintenance of GIS servers, applications, and related services (e.g., Web/Internet and City Intranet program design, development, and testing)
- Develops protocols for integration and extraction of GIS database
- Resolves issues related to conflicting data by restructuring or developing new data sets
- Troubleshoots problems encountered by users related to GIS database operations
- Verifies compliance of data sets with the City's GIS systems requirements
- Researches new GIS technology and recommends changes to ensure the City's GIS system operates efficiently
- Trains users on GIS applications

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Graduation from an accredited college or university with a Bachelor's degree in Computer Sciences, Information Technology/Systems, Geography, Urban Planning, or a directly related field, plus three years of experience working with GIS data sets, or an equivalent combination of education, training and experience, provided that the minimum degree requirement is met.

Licensure, Certification, or Other Qualifications

- None

WORKING CONDITIONS

- General office environment

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Personal computers and peripheral equipment (e.g., desktop computer, laptop computer, hand-held computer, computer terminals, modems, scanner)
- Client/server computer systems

PHYSICAL REQUIREMENTS

- No specific requirements

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Considerable knowledge of:

- *methods and techniques of database analysis and design (e.g., geographic data processing and cartographic principles and procedures)
- *geographic information systems (GIS) including hardware, software (e.g., Arc Info, Arc View), and communication technologies

Moderate knowledge of:

- *operation and installation of hardware and peripheral equipment
- *computer operating systems data security policies and processes
- space management, file back up, and restoration/disaster recovery techniques
- Web design principles and technologies

Some knowledge of:

- methods, practices, and procedures for analyzing and resolving computer-related problems
- commercial computer systems applications and their capabilities
- IT systems development practices, standards, and procedures
- programming logic, data manipulation, and integrated environments

Knowledge of applicable City and department policies, procedures, rules, regulations, and ordinances

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- *MATHEMATICS - Use mathematics to solve problems
- *COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions
- *COORDINATION WITH OTHERS - Adjust actions in relation to others' actions

- INSTRUCTING - Teach others how to do something
- *JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
- SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes
- *PROGRAMMING - Write computer programs for various purposes
- *QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance
- *TECHNOLOGY DESIGN - Generate or adapt equipment and technology to serve user needs
- *TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem
- VISUALIZE - Imagine how something will look after it is moved around or when its parts are moved or rearranged
- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns
- ORGANIZE INFORMATION - Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations)
- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Other Work Requirements

- PERSISTENCE - Persist in the face of obstacles on the job
- INITIATIVE - Demonstrate willingness to take on job challenges
- COOPERATION - Be pleasant with others on the job and display a good-natured, cooperative attitude
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks
- ANALYTICAL THINKING - Analyze information and using logic to address work or job issues and problems

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
(Valtera Corporation)

Date: July, 2010